



**PATENT** 

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## PROCESS FOR OPTIMIZING MILK PRODUCTION

A process for formulating a ruminant food ration in which the methionine needs of the ruminant are determined, a plurality of natural or synthetic feed ingredients and the nutrient composition of each of said ingredients are identified wherein one of said ingredients is 2-hydroxy-4-(methylthio)butanoic acid or a salt, amide or ester thereof, and a ration is formulated from the identified feed ingredients to meet the determined methionine needs of the ruminant which comprises one or more grains, a hydroxy analog of methionine, and optionally a bypass fat wherein (i) the hydroxy analog of methionine is selected from the group consisting of 2-hydroxy-4-(methylthio)butanoic acid and the salts, amides and esters thereof, (ii) the hydroxy analog of methionine is added separately from any bypass fat which is included in the ration, and (iii) the ration is formulated on the basis that at least 20% of the hydroxy analog of methionine is assumed to be available for absorption by the ruminant.

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